

**REMARKS**

**I. Introduction**

In response to the final Office Action dated December 29, 2009, Applicants have amended claims 1 and 6 in order to further clarify the subject matter of the present disclosure. Support for the amendments to claims 1 and 6 may be found, for example, in Tables 2 and 3 of the specification. New claims 11 and 12 have been added. Support for new claims 11 and 12 may be found, for example, in original claim 10. No new matter has been added.

A Request for Continued Examination (RCE) is being filed concurrently with this Amendment.

For the reasons set forth below, Applicants respectfully submit that all pending claims are patentable over the cited prior art references.

**II. The Rejection Of Claims 1 And 3-10 Under 35 U.S.C. § 103**

Claims 1-5 and 7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi et al. (US 2005/0008936) in view of Yano (USP No. 6,235,428) and Tanigawa (US 2002/0024041); and claims 6 and 8-10 as being unpatentable over Takahashi in view of Yano.

As a preliminary matter, Applicants would point out to the Examiner that claim 2 is no longer pending, having been cancelled in the previous Amendment. Applicants respectfully submit that Takahashi, Yano, and Tanigawa fail to render the pending claims obvious for at least the following reasons.

With regard to the present disclosure, amended independent claims 1 and 6 each recite, in part, an alkaline battery comprising a positive electrode material mixture containing electrolytic

manganese dioxide and nickel oxyhydroxide. The nickel oxyhydroxide comprises a crystal in which at least Mg is dissolved, and has a tap density determined after 500 taps of not less than 2 g/cm<sup>3</sup>. The nickel oxyhydroxide also has an average particle size based on volume of 8 to 20  $\mu\text{m}$ , and an average nickel valence of 2.95 to 2.99.

One feature of independent claims 1 and 6 is that nickel oxyhydroxide crystal has an average nickel valence of 2.95 to 2.99. As is discussed in paragraph [0066] of the specification, the batteries of the present disclosure comprise a nickel oxyhydroxide having a  $\beta$  type structure according to X-ray diffractometry. Table 3 shows that these batteries have a sufficient discharge capacity, i.e., the continuous discharge at 1 W of these batteries have discharge times of 102 and 105, and pulse discharge at 1A show a voltage decrease of 56 and 51 mV respectively. In contrast, batteries outside the range (P1 and P6) have discharge times of 98 and 99 at a continuous discharge of 1W and voltage decreases of 62 and 63 mV at pulse discharges of 1A.

It was asserted by the Examiner that Yano teaches a nickel oxyhydroxide positive electrode active material having a valence of 3.0 to 3.8. Yano further states that when the nickel valence is less than 3.0, a sufficient discharge capacity is difficult to obtain (see, col. 4:35-40 of Yano). However, as shown above, claims 1 and 6 of the present disclosure claim a nickel oxyhydroxide having a valence of 2.95 to 2.99. As can be seen, Yano actually teaches against the use of a battery of claims 1 and 6. Accordingly, Yano fails to teach or suggest the limitations of independent claims 1 and 6 of the present disclosure.

Moreover, Takahashi and Tanigawa do not, and are not relied upon to remedy this deficiency.

Therefore, as is well known, in order to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. As Takahashi,

Yano, and Tanigawa do not disclose an alkaline battery comprising a positive electrode material mixture containing electrolytic manganese dioxide and nickel oxyhydroxide, wherein the nickel oxyhydroxide also has an average particle size based on volume of 8 to 20  $\mu\text{m}$ , and an average nickel valence of 2.95 to 2.99, it is apparent that Takahashi, Yano, and Tanigawa fail to render amended claims 1 and 6 or any dependent claims thereon obvious. Accordingly, the Applicants respectfully request that the § 103 rejections of claims 1 and 6 be withdrawn.

**III. All Dependent Claims Are Allowable Because The  
Independent Claim From Which They Depend Is Allowable**

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as amended claims 1 and 6 are patentable for the reasons set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

Moreover, with regard to new claims 11 and 12, each recite a positive electrode material mixture further comprises at least one rare-earth oxide selected from the group consisting of  $\text{Er}_2\text{O}_3$ ,  $\text{Tm}_2\text{O}_3$ ,  $\text{Yb}_2\text{O}_3$  and  $\text{Lu}_2\text{O}_3$ . In contrast, Yano discloses the use of  $\text{Y}_2\text{O}_3$  as an example of rare-earth compounds used in a positive electrode, not rare-earth oxides, and not  $\text{Er}_2\text{O}_3$ ,  $\text{Tm}_2\text{O}_3$ ,  $\text{Yb}_2\text{O}_3$  and  $\text{Lu}_2\text{O}_3$ , as in claims 11 and 12. Moreover, Yano does not teach or suggest that rare-earth oxides are equivalent to rare-earth compounds. Accordingly, as Yano fails to disclose the rare-earth oxides  $\text{Er}_2\text{O}_3$ ,  $\text{Tm}_2\text{O}_3$ ,  $\text{Yb}_2\text{O}_3$  and  $\text{Lu}_2\text{O}_3$ , and as Takahashi and Tanigawa do not, and are not relied upon to remedy this deficiency, it is clear that the combination of Yano, Takahashi and Tanigawa do not render new claims 11 and 12 obvious.

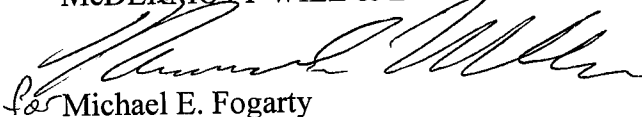
**IV. Conclusion**

Having responded to all open issues set forth in the Office Action, it is respectfully submitted that all claims are in condition for allowance.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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